

Response under 37 C.F.R. § 1.116  
Application No. 10/659,391

**REMARKS**

Claims 1-8 are pending in the application. Claims 3-6 are allowed. Claim 1 is rejected. Claims 2, 7 and 8 are objected to but would be allowable if placed into independent form. Applicants respectfully submit that all of the claims are patentable as originally presented and, thus, do not propose any amendment to claim 1 and have not placed any of claims 2, 7 and 8 into independent form.

***Claim Rejections - 35 U.S.C. § 102***

**Claim 1 is rejected under 35 U.S.C. § 102(b) as being anticipated by Anderson (5,051,631).** This rejection is traversed for at least the following reasons.

As a preliminary matter, Applicants respectfully refer the Examiner again to the analysis of this rejection, as presented in the Amendment filed on December 6, 2004, which distinguished the invention of claim 1 from Anderson. That analysis is incorporated by reference.

Specifically, by comparison to the exemplary embodiment of Fig. 1, claim 1 is directed to a proportional solenoid valve 20 having (1) an **input port** 16a to which a fluid is supplied, (2) an **output port** 16b that communicates with the input port and (3) a **drain port** 16c from which a part of the fluid supplied to the input port is discharged (see page 7, lines 12-19).

Claim 1 also requires a **cylindrical valve seat member** 15 that includes an **input/output side passage** 15c. Importantly, that passage is expressly defined as being provided between the input port 16a and the drain port 16c and between the output port 16b and the drain port 16c, as is clear from Fig. 1 and as explained at page 7, lines 20-24. The cylindrical valve seat member 15 further includes a **seat portion** 15b that is provided at an end of the input/output side passage 15c and a **drain side passage** 15d that is provided between the seat portion and the drain port, as illustrated in Fig. 1. A ball-shaped **valve element** 14 is brought into and out of contact with the seat portion 15d by operation of a **valve drive portion**. The valve drive portion is defined as including a coil 1 and is operative to displace the valve element 14 in accordance with current applied to the coil.

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The expressly claimed result of the operation of the valve drive portion is that the amount of fluid flowing from the input/output-side passage 15c to the drain port 16c through the drain side passage 15d is changed, along with the output pressure from the output port 16b. The drain side passage is specifically defined to have a certain number and arrangement of exhaust passage holes.

As is clear from the definition of the term “input/output-side passage” in the claim, as well as the description and illustration of that structure in the specification and drawings, that passage has certain characteristics:

- First, it must be provided between the input port and the drain port.
- Second, it must be provided between the output port and the drain port.
- Third, it must be included within the cylindrical valve seat member.

As is clear from Fig. 1, input/output-side passage 15c is disposed below the seat 15b of the cylindrical valve seat member 15 and is clearly coupled to both the output port 16b and the input port 16a on the lower side and the drain side passage 15d and drain port 16c on the other side. As explained at page 9 of the specification, this arrangement and operation is important to a high pressure environment where oil from source 21 is pumped 22 into the common input/output passage 15c so that a valve 24 may be controlled by regulating the pressure output from the output port 16b.

At pages 7 and 8 of the Amendment filed on December 6, 2004, it was asserted that a key distinguishing feature between the prior art and the structure of claim 1 relates to the recited cylindrical valve seat member, particularly the presence of an **input/output-side passage** having the foregoing features. It was asserted that the claimed valve would be placed between a source of high oil pressure 22 and a control valve 24 in order to regulate the pressure provided to the control valve. This arrangement requires a common input/output-side passage as illustrated in Fig. 1. It was asserted that Anderson does not have this feature.

A further distinguishing feature is that the drain-side passage of this invention is provided at the cylindrical valve seat member. In contrast, the drain passage in Anderson is provided at the ball guiding member.

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For all of the foregoing reasons, the claims should be allowable.

***Request for Amplification of Examiner Response***

In the Examiner's response to Applicants' arguments, as presented at page 2 of the Office Action, the Examiner asserts that the distinctions asserted by the Applicants are not understood. The Examiner notes that Anderson contains "a passage" which corresponds to the input/output-side passage of the claimed invention. The Examiner does not provide any identification of the passage or its relation to other structures in Anderson.

In the previous Office Action, the Examiner cited the illustrations in Figs. 7-9 of Anderson as being pertinent to the claimed invention, but again, did not specifically identify the structures that correspond to the claimed invention. In the previous Amendment, Applicants assumed that the Examiner was referring refers to the passage 110 in Fig. 7 as corresponding to the claimed input/output-side passage. The Examiner has not confirmed this assumption.

Applicants should not have to guess at the structure that the Examiner has in mind. In this regard, Applicants note that at column 6, lines 63-68, Anderson teaches that the illustrated solenoid valve functions in a manner similar to that of the valve 14 of Fig. 1, where the opening 62 into chamber C of a solenoid valve 14 is controlled. A corresponding structure is opening 62a and chamber C1 in Fig. 7. However, the combination of opening 62 and chamber C or opening 62a and chamber C1 cannot be the input/output-side passage since it does not have the connections between input and output ports and drain port as claimed. Thus, the claim cannot be anticipated.

To the extent that the Examiner persists in this rejection, the Examiner is respectfully requested to identify each and every structure of Anderson that corresponds to the claimed subject matter so that Applicants may have an adequate opportunity to reply. With regard to the illustration in Fig. 7, it is noted that the chamber C1 is above the seat 112 and cannot form the input/output passage. Moreover, the passage 110 cannot form the input/output-side passage because it is described at col. 7, lines 5-10 as extending to one end of a spool of the spool valve that functions in a controllable manner comparable to that of the valve 14. Notably, passage 110

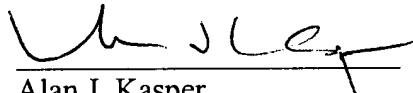
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and opening 62a cannot form the input/output side passage since the connections between an input and output port and drain port are not present, as claimed.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Alan J. Kasper  
Registration No. 25,426

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

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